

**Liberty Mutual Group
Androscoggin County
Lewiston, Maine
A-874-71-A-N**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction:

Liberty Mutual Group has applied for an Air Emission License permitting the operation of emission sources associated with their office building. The facility previously existed but a license was not required until the second generator was purchased for use.

Emission Equipment:

Liberty Mutual Group is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	3.5	25	#2, 0.3%	1
Boiler #2	3.5	25	#2, 0.3%	1
Emergency Generator #1	2.24	16.4	Diesel, 0.05%	--
Emergency Generator #2	2.44	17.8	Diesel, 0.05%	--

B. Application Classification:

The new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in Maine's Air Regulations. Liberty Mutual Group is determined to be a minor new source and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction:

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers #1 and #2:

Boilers #1 and #2 were both manufactured in 1988 and fire #2 fuel oil with a maximum sulfur content not to exceed 0.3% and a design capacity of 3.5 MMBtu/hr. Boilers #1 and #2 are not subject to EPA New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

Boilers #1 and #2 both exhaust through stack #1.

A summary of the BACT analysis for Boilers #1 and #2 follows:

1. Use of #2 fuel oil with a maximum sulfur content not to exceed 0.3%.
2. NO_x emission limits are based on data for boilers of similar size and age and firing #2 fuel oil.
3. CO and VOC emission limits are based upon AP-42 data dated 9/98 for commercial/industrial boilers smaller than 100 MMBtu/hr.
4. MEDEP Chapter 103 regulates PM emission limits for fuel burning equipment greater than 3 MMBtu/hr. PM₁₀ emission limits are derived from PM limits.
5. Visible emissions from stack 1 shall not exceed 30% on a 6 minute block average, except for no more than 3 six-minute block averages in a 3 hour period.

C. Emergency Generators:

Liberty Mutual Group operates two generators, for emergency use. Emergency Generator #1 is a 230 kW unit manufactured in 1988 with a maximum design heat input of 2.24 MMBtu/hr. Emergency Generator #2 was manufactured in 2003 and is rated at 250 kW and a maximum heat input of 2.44 MMBtu/hr. Both

generators fire diesel fuel with a maximum sulfur content not to exceed 0.05%. As they are both emergency units, each is limited to 500 hours of operation per month. They are not subject to NSPS.

A summary of the BACT analysis for the emergency generators is as follows:

1. Use of diesel fuel with a maximum sulfur content not to exceed 0.05, and with an operational limit not to exceed 500 hours/year per generator, on a 12-month rolling total basis.
2. PM₁₀, NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel units smaller than 600 hp. PM emission limits are derived from the PM₁₀ limits.
3. Visible emissions from Emergency Generator #1 shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period.
4. Visible emissions from Emergency Generator #2 shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period.

D. Annual Emission Restrictions:

Liberty Mutual Group shall be restricted to 100,000 gallons per year of #2 fuel oil, based on a 12-month rolling total, and with a sulfur content not to exceed 0.3% by weight, to be fired in Boiler #1 and Boiler #2. The Emergency Generators shall each not exceed 500 hours of operation per year, on a 12-month rolling total basis.

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	0.93
PM ₁₀	0.93
SO ₂	2.18
NO _x	7.61
CO	1.36
VOC	0.42

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the total facility emissions, the Liberty Mutual Group is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-874-71-A-N subject to the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive

- dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.

- (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods,

at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

(16) Boilers #1 and #2

- (i) Boilers #1 and #2 shall fire #2 fuel oil with a maximum sulfur content not to exceed 0.3% by weight. Liberty Mutual Group shall not exceed a facility fuel limit of 100,000 gallons of #2 fuel, based on a 12-month rolling total. Compliance shall be demonstrated by fuel use records, purchase slips and receipts showing the sulfur content of the fuel and maintained for 12 rolling months. [MEDEP Chapter 115, BACT]
- (ii) Boilers #1 and #2 shall not exceed the following emission limits:

**Boilers #1 and #2 Emission Limits
(per boiler)**

<u>Pollutant</u>	<u>lb/hr</u>	<u>lb/MMBtu</u>
PM	0.28	0.08
PM ₁₀	0.28	--
SO ₂	1.06	--
NO _x	1.23	--
CO	0.13	--
VOC	0.01	--

[MEDEP Chapter 115, BACT]

Compliance shall be demonstrated on request of the Department through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A.

- (iii) Visible emissions from stack 1 shall not exceed 30% on a 6 minute block average, except for no more than 3 six-minute block averages in a 3 hour period. [MEDEP Chapter 101, Section 2(B)(1)(b)]
- (17) Emergency Generators #1 and #2
- (i) Emergency Generators #1 and #2 shall each be limited to 500 hours per year of operation, based on a 12 month rolling total. An hour meter shall be maintained and operated on each emergency generator. [MEDEP Chapter 115, BACT]
 - (ii) Emergency Generators #1 and #2 shall fire diesel fuel with a maximum sulfur content not to exceed 0.05% by weight. Compliance shall be demonstrated through fuel use records and receipts showing the sulfur content of the fuel. [MEDEP Chapter 115, BACT]
 - (iii) A log shall be kept documenting the dates, times and reason of operation each time either generator is operated. [MEDEP Chapter 115, BACT]
 - (iv) Emissions from the emergency generators shall not exceed the following:

Emergency Generators #1 and #2 Emission Limits

<u>Pollutant</u>	<u>Generator #1 (lb/hr)</u>	<u>Generator #2 (lb/hr)</u>
PM	0.70	0.76
PM ₁₀	0.70	0.76
SO ₂	0.12	0.13
NO _x	9.88	10.76
CO	2.13	2.32
VOC	0.79	0.86

[MEDEP Chapter 115, BACT]

- (v) Visible emissions from Emergency Generator #1 shall not exceed an opacity of 30% on a 6-minute block average basis, except for no more than 2 six minute block averages in a 3-hour period. [MEDEP Chapter 101, Section 2(B)(1)(f)]
- (vi) Visible emissions from Emergency Generator #2 shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101, Section 2(B)(1)(d)]
- (18) Liberty Mutual Group shall submit an application for an amendment prior to running either Emergency Generator as a Dispatchable Load Generator. The amendment will reflect this change and the hours of operation will be reduced from 500 to 250 hours per year (based on a 12 month rolling total). [MEDEP Chapter 115, BACT]
- (19) Liberty Mutual Group shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605-C).
- (20) Liberty Mutual Group shall pay the annual air emission license fee within 30 days of November 30 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

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(21) The term of this Order shall be for five (5) years from the signature below.
[MEDEP Chapter 115]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 6, 2003

Date of application acceptance: October 21, 2003

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality